AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method offor producing a steel ingot, which comprises the steps of:

preparing molten steel under vacuum;

forming a magnesium oxideoxides by adding Mg into the molten steel, in which molten steel is adjusted to contain a sufficient amount of Mg in order to make oxides containedadmixed in the molten steel so as to have a chemical composition a primary component of which is MgO; and

subsequently producing a consumable electrode from the molten steel containing magnesium oxides; and

remelting the consumable electrode under higher vacuum than that of the former process of forming the magnesium oxides in order to dissociate dissociating the magnesium oxidesoxide contained in the molten steelmetal into Mg and oxygen, by making a degree of vacuum of the melting environment higher than that of the former process of forming a magnesium oxide whereby thereby making a Mg content in the molten steel to be not more than 50% of that in the former process of forming a magnesium oxidesoxide.

Claim 2 (canceled).

3. (currently amended): The method according to claim 12, wherein the remelting is

~~of~~ a vacuum arc remelting.

4. (currently amended): The method according to claim 1~~2~~, wherein the steel ingot contains a nitride forming element as a component of the steel.

5. (currently amended): The method according to claim 1, wherein the degree of vacuum in the first step of forming a magnesium oxide is 6 kPa to 60 kPa and the degree of vacuum in the second step of the remelting process~~dissociating the magnesium oxide~~ is lowered to less than 0.6 kPa.

6. (previously presented): The method according to claim 1, wherein the relationship between an amount of Mg (Mg_{OXI}) and an amount of Al (Al_{OXI}) is adjusted in the first step of forming a magnesium oxide so as to meet the following equation:

$$Al_{OXI}\ (\text{mass ppm})/Mg_{OXI}\ (\text{mass ppm}) = 5 \text{ to } 100.$$

7. (previously presented): The method according to claim 1, wherein Mg is added into the molten steel as a Ni-Mg alloy which contains from exclusive zero to not more than 20 mass % of Mg.

8. (previously presented): The method according to claim 1, wherein the steel ingot contains 0.01 to 6 mass % of Al.

9. (previously presented): The method according to claim 1, wherein the steel ingot contains 0.1 to 2 mass % of Ti.

10. (previously presented): The method according to claim 1, wherein the steel ingot is of a maraging steel.

11. (previously presented): The method according to claim 1, wherein the steel ingot is of a tool steel.

12. (original): The method according to claim 10, wherein the maraging steel consists essentially of, by mass, less than 10 ppm of O (oxygen), less than 15 ppm of N (nitrogen), not more than 0.01% C, 0.3 to 2.0% or less of Ti, 8.0 to 22.0% of Ni, 5.0 to 20.0% of Co, 2.0 to 9.0% of Mo, 0.01 to 1.7% of Al, and the balancer of Fe and unavoidable impurities.

13. (new) The method according to claim 1, wherein an amount of the additive Mg in the magnesium oxide forming process is not more than 10 to 200 ppm.

14. (new) The method according to claim 1, wherein the steel is a maraging steel, and wherein a maraging steel ingot obtained after the remelting process contains oxide type nonmetallic inclusions having a maximum length of not more than 16.0 μm, and an amount of Al_2O_3 type oxide inclusions to a total the number of oxide inclusions having a size of not less than 10 μm is not more than 66.7%.

15. (new): The method according to claim 1, wherein the steel is a maraging steel, and wherein a maraging steel ingot obtained after the remelting process contains nitride type nonmetallic inclusions having a maximum length of not more than 10 μm.

16. (new): The method according to claim 1, wherein a maraging steel ingot obtained after the remelting process is used as a raw material of a power transmission belt of automobiles, which has a thickness of not more than 0.5 mm.